FIG . 1

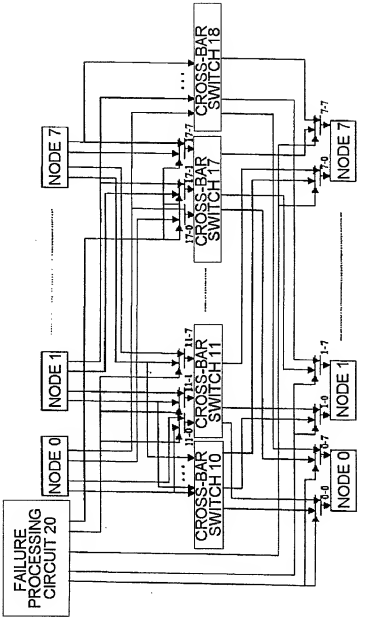
FAILURE PROCESSING CIRCUIT 20
NODE 0
NODE 1
NODE 7
CROSS-BAR SWITCH 10
CROSS-BAR SWITCH 11
CROSS-BAR SWITCH 17
CROSS-BAR SWITCH 18
NODE 0
NODE 1
NODE 7

FIG . 2

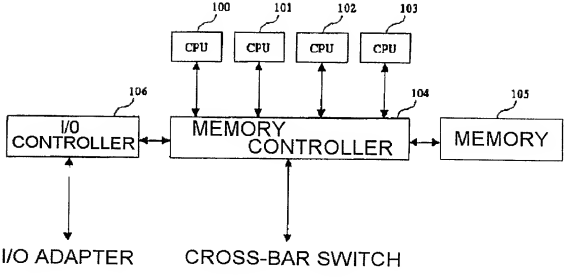
100
101
102
103
CPU
CPU
CPU
CPU
106
104
105
I/O CONTROLLER
MEMORY CONTROLLER
MEMORY
I/O ADAPTER
CROSS-BAR SWITCH

FIG . 3

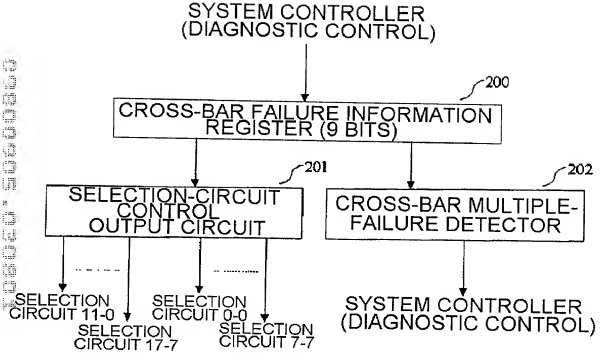
SYSTEM CONTROLLER
(DIAGNOSTIC CONTROL)
200
CROSS-BAR FAILURE INFORMATION REGISTER (9 BITS)
201
SELECTION-CIRCUIT CONTROL OUTPUT CIRCUIT
202
CROSS-BAR MULTIPLE-FAILURE DETECTOR
SELECTION CIRCUIT 11-0
SELECTION CIRCUIT 17-7
SELECTION CIRCUIT 0-0
SELECTION CIRCUIT 7-7
SYSTEM CONTROLLER
(DIAGNOSTIC CONTROL)

FIG . 4

FAULTY CROSS-BAR SWITCH	BYTE 0	BYTE 1	BYTE 2	BYTE 3	BYTE 4	BYTE 5	BYTE 6	BYTE 7
CROSS-BAR SWITCH 10	CROSS-BAR SWITCH 11	CROSS-BAR SWITCH 12	CROSS-BAR SWITCH 13	CROSS-BAR SWITCH 14	CROSS-BAR SWITCH 15	CROSS-BAR SWITCH 16	CROSS-BAR SWITCH 17	CROSS-BAR SWITCH 18
CROSS-BAR SWITCH 11	CROSS-BAR SWITCH 10	CROSS-BAR SWITCH 12	CROSS-BAR SWITCH 13	CROSS-BAR SWITCH 14	CROSS-BAR SWITCH 15	CROSS-BAR SWITCH 16	CROSS-BAR SWITCH 17	CROSS-BAR SWITCH 18
CROSS-BAR SWITCH 12	CROSS-BAR SWITCH 10	CROSS-BAR SWITCH 11	CROSS-BAR SWITCH 13	CROSS-BAR SWITCH 14	CROSS-BAR SWITCH 15	CROSS-BAR SWITCH 16	CROSS-BAR SWITCH 17	CROSS-BAR SWITCH 18
CROSS-BAR SWITCH 13	CROSS-BAR SWITCH 10	CROSS-BAR SWITCH 11	CROSS-BAR SWITCH 12	CROSS-BAR SWITCH 14	CROSS-BAR SWITCH 15	CROSS-BAR SWITCH 16	CROSS-BAR SWITCH 17	CROSS-BAR SWITCH 18
CROSS-BAR SWITCH 14	CROSS-BAR SWITCH 10	CROSS-BAR SWITCH 11	CROSS-BAR SWITCH 12	CROSS-BAR SWITCH 13	CROSS-BAR SWITCH 15	CROSS-BAR SWITCH 16	CROSS-BAR SWITCH 17	CROSS-BAR SWITCH 18
CROSS-BAR SWITCH 15	CROSS-BAR SWITCH 10	CROSS-BAR SWITCH 11	CROSS-BAR SWITCH 12	CROSS-BAR SWITCH 13	CROSS-BAR SWITCH 14	CROSS-BAR SWITCH 16	CROSS-BAR SWITCH 17	CROSS-BAR SWITCH 18
CROSS-BAR SWITCH 16	CROSS-BAR SWITCH 10	CROSS-BAR SWITCH 11	CROSS-BAR SWITCH 12	CROSS-BAR SWITCH 13	CROSS-BAR SWITCH 14	CROSS-BAR SWITCH 15	CROSS-BAR SWITCH 17	CROSS-BAR SWITCH 18
CROSS-BAR SWITCH 17	CROSS-BAR SWITCH 10	CROSS-BAR SWITCH 11	CROSS-BAR SWITCH 12	CROSS-BAR SWITCH 13	CROSS-BAR SWITCH 14	CROSS-BAR SWITCH 15	CROSS-BAR SWITCH 16	CROSS-BAR SWITCH 18
CROSS-BAR SWITCH 18	CROSS-BAR SWITCH 10	CROSS-BAR SWITCH 11	CROSS-BAR SWITCH 12	CROSS-BAR SWITCH 13	CROSS-BAR SWITCH 14	CROSS-BAR SWITCH 15	CROSS-BAR SWITCH 16	CROSS-BAR SWITCH 17
NONE FAULTY	CROSS-BAR SWITCH 10	CROSS-BAR SWITCH 11	CROSS-BAR SWITCH 12	CROSS-BAR SWITCH 13	CROSS-BAR SWITCH 14	CROSS-BAR SWITCH 15	CROSS-BAR SWITCH 16	CROSS-BAR SWITCH 17